STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2
) HEINZ AVE., SUITE 200
ERKELEY, CA 94710-2737

June 2, 1997

Commander
Engineering Field Activity, West
Naval Facilities Engineering Command
Attn.: Camille Garibaldi
900 Commodore Drive
San Bruno, California 94066-2402

Dear Ms. Garibaldi:

ADDITIONAL COMMENTS ON THE RADIATION SURVEY REPORT, PRE-DRAFT DATED FEBRUARY 1997 NAVAL AIR STATION, ALAMEDA

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) and the California Department of Health Services (DHS) have completed our review of the pre-draft Radiation Survey Report. Our April 21, 1997 letter stated that additional comments may fallow the April 23, 1997 meeting between the Navy and the environmental regulators. These enclosed comments were generated by DHS after receiving new information at the April 23, 1997 meeting.

If you have any questions regarding this letter, please call me at (510) 540-3809.

Sincerely,

Thomas P. Lanphar
Project Manager
Base Closure Branch

Enclosure
cc: See next page.

cc. Ms. Lynn Suer
Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94612

Mr. Steve Edde
Base Environmental Coordinator
Alameda Naval Air Station
Building 1, Code 52
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Mr. James Ricks
U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105

Ms. Penny Leinwander
Department of Health Services
Environmental Management Branch
601 North 7th Street, MS 396
Sacramento, CA 95814

State of California

Department of Health Services

Memorandum

Date : May 20, 1997

To : Mr. Thomas Lanphar
Department of Toxic Substances Control (DTSC), Region 2
Office of Military Facilities
700 Heinz Avenue, Suite 200
Berkeley, California 94710

From : Environmental Management Branch
601 North 7th Street (MS 396)
(916) 445-0498

Subject : Department of Health Services' (DHS) Follow-up Review of Radiation Survey Report - Naval Air Station, Alameda, CA Pre-Draft, dated February 1997 (DHS/DTSC Work Form #332)

Attached are DHS' comments on the subject document. This review was performed in support of the Interagency Agreement between DTSC and DHS by Ms. Penny Leinwander, Associate Health Physicist. If you need additional information, please contact Ms. Leinwander at (916) 324-1465.

Darice G. Bailey
Senior Health Physicist

cc: Mr. David Wright
Department of Toxic Substances Control
Office of Military Facilities
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P.O. Box 806, HQ-28
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Ms. Penny Leinwander
Department of Health Services
Environmental Management Branch
601 North 7th Street, MS 396
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DEPARTMENT OF HEALTH SERVICES REVIEW

ACTIVITY: Follow-up Review of Radiation Survey Report - Naval Air Station, Alameda, CA Pre-Draft, dated February 1997 (DHS/DTSC Work Form #332)

FACILITY: Naval Air Station, Alameda, CA

General Comments:

1. The Department of Health Services (DHS) met with Navy representatives on April 23, 1997, and discussed the options presented in this report's CONCLUSIONS AND RECOMMENDATIONS (Section 6.0). DHS comments on the conclusions and recommendations for Sites 1 and 2, the Former Radioactive Waste Storage Shack Area, Building 5, Building 400, and Related Storm Sewer and Drain Lines are provided below.

2. Currently DHS uses "Guidance for Cleanup of Radioactivity on Closing Military Bases for Unrestricted Public Use of Property", dated April 5, 1994 (herein referred to as the "DHS guidance document") for determining the adequacy of survey reports and decommissioning plans as they relate to public health. This guidance will be used until federal decommissioning regulations are published in the federal register.

Specific Comments:

1. Page 6-1, para. 2. **"General basis for recommendations are predicated on the following principles: (1) removal actions should be taken where there is high potential for human contact with intact radium sources (as identifiable from the surface) or human contact with highly elevated soil activity; and (2) removal actions should be considered where there are situations where radiation does to exposed personnel (non-occupationally qualified radiation workers) would exceed 15 millirem per year, based on realistic scenarios."**

In reference to the first principle used as a general basis for recommendations, if discrete radioactive items cannot be removed, then unrestricted public use is not an option for the property in question, and licensing by DHS would be required if the property is not under exclusive federal jurisdiction or ownership.

In reference to the second principle, the DHS guidance recommends that diffuse radioactive contamination be removed to levels that would minimize the cancer

risk to the exposed population for unrestricted public use, i.e., exposure would not result in a 70-year lifetime cancer risk in excess of 10-6 to 10-4. For diffuse radium contamination, 40 CFR 192 is used as the cleanup standard for unrestricted use.

2. Page 6-1, para. 4. **"Alternatively, isolation of structures may be appropriate where high remediation costs exceed benefits under conditions where. . ."**

If structures or systems are isolated that contain radium, then specific licensure by the Department may be required for property that is not under exclusive federal jurisdiction or ownership. Complete characterization (including any contamination resulting from migration) would be required before licensing could be considered. For diffuse radium in isolated systems, concentrations of less than 5 pCi/g (or 15 pCi/g if deeper than 15 cm) would not require a license and the property could be released for unrestricted use.

Removal of all contamination is the Department's preferred option, and may end up being less costly and less time consuming than characterizing the amount of radioactive material left in place. An adequate characterization of the amount of material that may be in the isolated system and the amount of material that could have migrated to soil over the history of use may be difficult to delineate to the satisfaction of the Department.

3. Page 6-2, para. 2. **Sites 1 and 2.**

DHS agrees that further 100% surveys of the remainder of Site 1 should be conducted and that all identified discrete sources be removed. If Site 1 landfill is capped, and the property is transferred so that it is no longer exclusive federal jurisdiction or ownership, then specific licensure by DHS would be required. Characterization of the entire contents of the landfill would be required to complete the licensing process.

For the Site 1 jogging trail, no further action may be recommended if all discrete sources are removed and the radium concentrations do not exceed 40 CFR192 levels. Discrete sources that are at a depth that makes them undetectable by a surface scan would also require removal. Is it known how the sources found on the jogging trail near the storm sewer drainage grate arrived at that location? Is the jogging track area located within the boundaries of the Site 1 landfill? If yes, then the jogging track would require characterization and specific licensure.

4. Page 6-3, para. 1. **Former Radioactive Waste Storage Shack Area**

DHS recommends that discrete sources be removed and that contaminated soil

be excavated and removed to levels consistent with 40 CFR 192. A remediation plan should be prepared discussing how this will be accomplished.

5. Page 6-4, para. 2. **Building 5**

As discussed in the April 27 meeting, all contamination in Building 5 should be remediated. Concerning the abandonment in place of contaminated subterranean lines, see the discussion above under Specific Comment #2.

6. Page 6-5, para 2. **Building 400**

Concerning the abandonment in place of contaminated subterranean lines, see the discussion above under Specific Comment #2.

7. Page 6-6, para. 1. **Storm Sewer Lines and Manholes**

   DHS agrees with the recommendation that readily accessible areas within the storm sewer lines and manholes be decontaminated to levels acceptable for release for unrestricted use. For any residual contamination in the lines, see the discussion above under Specific Comment #2.

8. Page 3-3. The "background equivalent activity" was not part of the methodology proposed in the work plan. How was this factor derived? Please verify that the MDAs were calculated in accordance with the work plan. Any changes in the methodology should be justified.